The botanical collections of Ebenezer Cowley

John Leslie Dowe

Summary

Dowe, J.L. (2014). The botanical collections of Ebenezer Cowley. ***Austrobaileya* 9(2): 263–278**. Ebenezer Cowley (1849–1899) was active as a botanical collector in north Queensland and British New Guinea (now Papua New Guinea) during 1889–1898. His official role was Overseer of the Kamerunga State Nursery. Cowley sent all his specimens to F.M.Bailey, Government Botanist in Brisbane. About 370 Cowley specimens have been located, and most of these, *c.* 330, are extant at BRI. A small number (*c.* 40) of duplicates and unicates are housed at BM, CNS, DNA, K, L, M, MEL and NSW. The provenance of Cowley's north Queensland collections included mostly the Kamerunga and Barron River areas. 47 Cowley specimens are significant in typification, mainly through the taxonomic work of F.M.Bailey: of these, 19 are associated with species names in current use. The taxa that involved Cowley specimens in typification are listed with annotations. Cowley's 1st daughter, Clara Moxon (née Cowley) (1875–1905) also sent plant specimens to, and corresponded with, F.M.Bailey.

Key Words: Ebenezer Cowley, Clara Cowley, Queensland plant collectors, Kamerunga State Nursery, typification of north Queensland plants, F.M.Bailey

John Leslie Dowe, Australian Tropical Herbarium, James Cook University, Cairns, Qld, Australia. Email: john.dowe@jcu.edu.au

Introduction

Ebenezer Cowley (born 18 Apr. 1849, died 9 Feb. 1899) (**Fig. 1**) was active as a botanical collector in north Queensland and Papua New Guinea (then known as British New Guinea) during 1890–1898. His birth was registered in Cirencester District, England, and his first years were spent in Fairford, Gloucestershire (Barrett 2013a). Details of his early schooling are unknown, but he migrated to South Africa prior to 1871 and trained at the Durban Botanic Gardens as a horticulturist (Gibbney & Smith 1987). In South Africa, he studied the flora of Natal whilst engaged in the sugar milling industry (Stephens 1981). Leaving South Africa in 1873, he travelled to Australia and later to Fiji (1874?) where he was involved with sugar milling. Moving to Queensland in 1881, he managed the CSR Victoria Plantation, near Ingham, until 1885 (Griggs 2003), after which he joined his cousin Alfred Sandlings Cowley (later Sir Alfred) in pastoral and sugar-cropping activities on properties in the Herbert River area and Mourilyan (Stephens 1981; Saunders 2013).

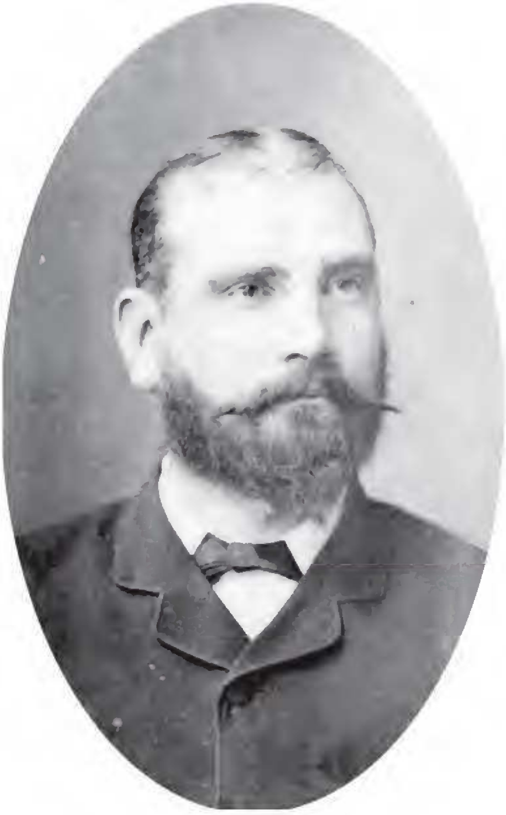


Fig. 1. Photograph of Ebenezer Cowley, 1890. Photographer unknown, courtesy of the Cairns Historical Society.

Accepted for publication 18 August 2014

In 1889, Cowley was appointed the first Overseer of the Kamerunga State Nursery near Cairns, a position he held until his death from liver disease in 1899 (Stephens 1981; George 2009). In Cowley's first year at Kamerunga, Government Botanist F.M.Bailey noted that Cowley had "during the past year collected specimens of several interesting plants" (Bailey 1891). Cowley contributed to matters regarding tropical horticulture and was regularly quoted with respect to his knowledge on the subject (Shelton 1892; Anon. 1896; Sim 2001, 2012). Griggs (2003) noted the apparent lack of formal training with regard to Cowley's sugar varietal research activities, and the subsequent relocation of sugar cane research to Mackay in central Queensland in the late 1890s (Griggs 2011).

The Kamerunga State Nursery (from 1940 known as Kamerunga Research Station) was established in 1889, as an initiative of the newly formed Queensland Department of Agriculture. The Nursery's primary emphases were trialling and experimenting with tropical crops of commercial interest (Thomatis 1895; Benson 1914; Stephens 1981; Barker & Byford 1988). Because of wartime austerity, the Nursery closed in 1916, and the land was put up for lease. In 1940, part of the grounds were reacquired by the Department of Agriculture and Stock, and used as a research station until the late 1990s (Cairns Plan 2005). The grounds are now occupied by Cairns Water, private housing, part of the Kamerunga Conservation Reserve, and vacant allotments. Some of the former plantings still exist as remnants within the area.

During the period when Cowley was Overseer at the Nursery, some significant introductions were trialled (Bailey 1910), including *Carthamus tinctorius* L. (safflower), *Castilla elastica* Sesse (Panama rubber), *Cocos nucifera* L. (coconut palm), *Coffea arabica* L. (coffee), *Cola acuminata* (P.Beauv.) Schott & Endl. (cola nut), *Elaeis guineensis* Jacq. (oil palm), *Ficus elastica* Roxb. ex Hornem. (India rubber), *Garcinia mangostana* L. (mangosteen), *Hevea brasiliensis* (Willd. ex A.Juss.) Muell.Arg. (para rubber), *Maranta arundinacea* L. (white arrowroot), *Musa acuminata* Colla (banana), *Musa textilis* Née (Manilla hemp), *Nicotiana tabacum* L. (tobacco), *Spondias cytherea* Sonn. (vi-apple), *Thea chinensis* Sims (tea), *Theobroma cacao* L. (cocoa) and *Vanilla planifolia* Andrews (vanilla). Possibly the most significant introductions included sugar varieties (Griggs 2003, 2011), some of which were collected by Cowley during visits to Papua New Guinea in 1892–1893 (van Steenis-Krusemen 1950), and by Henry Tryon, then Qld Government Entomologist, in 1895 (Stephens 1981; Griggs 2003, 2011). A breeding program at the Nursery involving forms of *Carica papaya* L. (pawpaw) resulted in the development of the 'Cowleyii' and the 'New Guinea' varieties – the former a dioecious type and the latter an hermaphrodite (Stephens 1981). Not so fortuitous was the introduction of a current weed of national significance *Prosopis pallida* (Humb. & Bonpl. ex Willd.) Kunth (algaroba) that was propagated and subsequently distributed by the Nursery in 1895 (AWC 2012). Other plants that were grown at the Nursery, such as *Castilla elastica* (Panama rubber), *Parmentiera aculeata* (Kunth) L.O.Williams (candle tree) and *Turbina corymbosa* (L.) Raf. (turbina) are now well established invasive weeds in the Barron River Gorge area and the latter throughout the Wet Tropics. Cowley was active in establishing both *Cocos nucifera* (coconut) and *Terminalia catappa* L. (beach or sea almond) on the Cairns foreshore and nearby islands, both of which did not occur in the immediate area prior to that introduction, but have since become ubiquitous, and seemingly natural, components of the strand vegetation.

Publications

Cowley was a productive author on the subject of tropical crops and horticulture (Cowley 1890–1898). He published regularly as a horticultural journalist in the *Cairns Post*, *Cairns Observer* and the *Morning Post* (for examples see, Cowley 1890, 1891, 1892, 1897a–c). These articles mostly covered a single plant species, and were informative, knowledgeable and written in a simple style. Additionally, he contributed a series of technical papers to the peer-reviewed *Queensland Agricultural Journal* on various tropical fruits, fibres, herbs and crops (Cowley 1897d–j, 1898a–c, 1899a–b). Cowley appears to have made no direct input into taxonomic publications, and only rarely wrote on indigenous plants. For example, he wrote of *Elaeocarpus bancroftii* F.Muell. & F.M.Bailey as a potential nut crop, and provided anecdotes on endocarp extraction and the labours involved (Cowley 1890–1898).

Botanical collections

It is not known if the role of botanical collector was included as one of Cowley's responsibilities as Overseer at the Kamerunga State Nursery. I am not aware of any direct references to this in the Annual Reports from either himself or F.M.Bailey. However, Cowley was particularly active as a collector during the first years of his tenure at the Nursery. His most productive collecting years were 1892–1894, which resulted in the publication of many new taxa by F.M. Bailey in the following years. It appears that Cowley sent all his specimens to Bailey in Brisbane. Bailey, and later other botanists, only ever distributed a small number of these specimens, either as duplicates or unicates, to other herbaria. A further active period of collecting in 1897 produced a corresponding increase in publication of new taxa by F.M Bailey from 1897 to 1900. Otherwise, Cowley made collections in every year 1890–1898. Cowley's primary collecting locations were Kamerunga and Barron River (about 180 specimens), but other north Queensland localities included Cooktown, Daintree River, Johnstone River, Kuranda, Mourilyan, Port Douglas, Russell River, Tolga and Trinity Bay; in Torres Strait (about 50 specimens) on Thursday Island and Dalrymple (Damuth) Island; and in Papua New Guinea (about 30 specimens) at Port Moresby and Kwato Island.

By the time Cowley took up residence in Kamerunga in 1889, access to the Barron River area was possible because of the establishment of service tracks, such as the Douglas and Smith tracks, to the Hodgkinson Goldfield in 1876. Construction of the Cairns to Herberton railway line was commenced in 1886 [and eventually completed in 1910], and tracks to the railway construction sites were established at many locations. The railhead construction camp was adjacent to the Kamerunga State Nursery (Stephens 1981). Agricultural activities and other industries were well advanced on the banks of the lower Barron River by this time. Although other botanical collectors, such as F.M. Bailey in 1877, Stephen Johnson in 1891, L.G. Nugent in 1894–1897 and G. Podenzana in 1891–1893, had visited the area prior to and during Cowley's time at Kamerunga (Orchard 1999; George 2009), few of their specimens from this area were associated with the description of new taxa. Cowley was subsequently the most significant collector of taxa that have their type locality in the Kamerunga and Barron River Gorge areas (Dowe *in prep.*). Cowley's collecting dates and locations are presented in **Table 1**. Correspondence from Bailey to Cowley during this period is archived in the Queensland Herbarium library as part of the F.M.Bailey Letterbooks collection.

Bailey noted that Cowley's 1st daughter Clara Cowley [born 1875; died 1905] was involved with the collection of some specimens. Clara married William Ernest Moxon in 1893, and moved away from Cairns at the end of that year (Barrett 2013b). In the protologue of *Lycopodium clarae* F.M.Bailey (= *Phlegmariuris dalhousieanus* (Spring) A.R.Field & Bostock), Bailey (1893a) noted "*After Miss Clara Cowley, a young energetic collector of the Barron River flora*". The type of *L. clarae* was initially cited as "*Upper Freshwater Creek, E. Cowley*"; later, Bailey (1902) noted a collection "*Upper Freshwater Creek, Miss Clara Cowley*". In correspondence between Bailey and E. Cowley, it was indicated that Clara was despatching specimens in her father's absences. In other correspondence, Bailey requested additional material of *L. clarae*. This was in turn despatched by Clara who most likely obtained a sample from plants growing in the shade houses at the Kamerunga State Nursery. The type specimen of *L. clarae* at BRI appears to

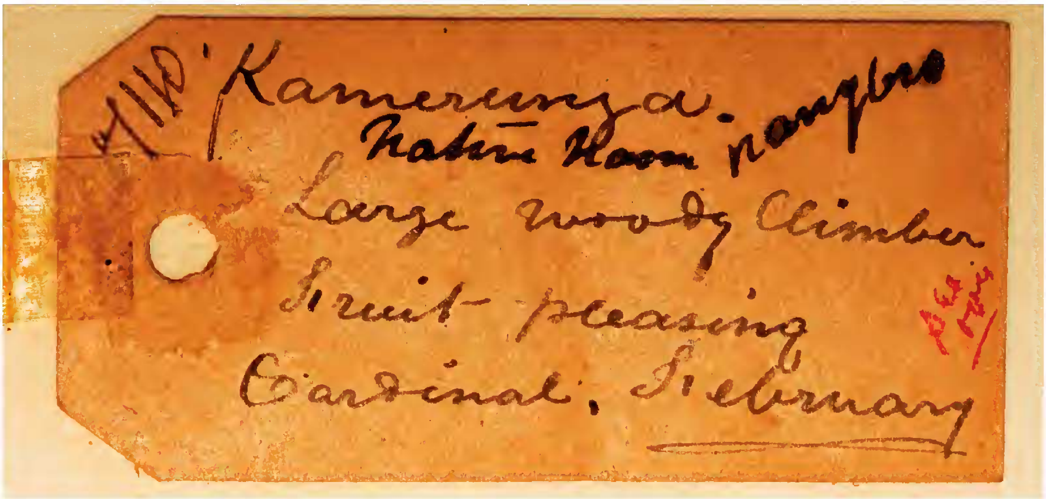
Table 1. The dates and locations of Cowley collections, based on specimen label data

Date	Location
1889–1898	Kamerunga, Barron River, Stoney Creek, Rocky Creek, Freshwater Creek, Cairns
March 1890	Thursday Island
Dec. 1892–Jan. 1893	Papua New Guinea (Port Moresby, Kwato Island)
May 1893	Thursday Island & Yule Island (Papua New Guinea)
Jan. 1894	Port Douglas
June 1894	Port Douglas/Daintree River
Sept. 1897	Mourilyan

include two elements: one the original part collected by E. Cowley at Upper Freshwater Creek, and another, most likely collected from a cultivated plant at Kamerunga as noted above, and otherwise sent to Bailey by Clara Cowley, hence Bailey's reference to this effect. However, it is not possible to determine which element is which, and the complete sheet is being interpreted as the type specimen (Field & Bostock 2013).

In the protologue of *Erycibe paniculata* var. *coccinea* F.M.Bailey, Bailey (1893b) noted: *"I am indebted to Miss Cowley, of Kamerunga, for the ripe fruit of the above plant, which she says is of a pleasing cardinal red*". From correspondence between Bailey and E. Cowley, it was evident that Clara Cowley did indeed despatch the seeds. However, the type specimen *Cowley 71d*, consists of a single leaf and a portion of stem with remnant inflorescence bases. The fate of the seeds is not known or if they were indeed preserved by Bailey as a specimen. An example of Ebenezer Cowley's handwriting is presented in **Fig. 2**. An example of Clara's handwriting has not been located.

In his early years of collecting from 1891 through to 1895, Cowley despatched his specimens to Bailey in batches of about 10–30 specimens. The specimens were numbered sequentially and appended with an alphabetic addition. For example, in April 1892, one batch was numbered 7A to 23A, a subsequent batch sent in May was labelled 24A to 51A, and later another 51A to 74A, and so on until 100A was reached. After this, numbering started again at 1 but the alphabetic addition was changed to 'B'. Thus the following batch, in June, was numbered 1B–18B, and so on. This system continued with four '100 specimen' batches, each appended by A, B, C or D. Bailey and Cowley used these numbers in correspondence when referring to identifications or requests for additional materials. For many specimens, Cowley attached a cardboard label with a reinforced eyelet to his specimens (**Figs. 2** and **3**). Correspondence between Bailey and Cowley indicated that Bailey supplied Cowley with labels upon request. Cowley used this numbering system consistently from early 1892 through to July 1895. However, from May 1893 onwards, Cowley concurrently numbered some specimens seemingly randomly, including single despatches or small batches of specimens that were not included in his larger batches. In many cases, the same collection number was used multiple times for different specimens. For example, between May 1893 and September 1897, there are four specimens labelled as '1', five as '2', seven as '3', and so on. Ultimately, the numbering of the Cowley specimens does not provide reliable chronology or location data, although collection numbers appended with an alphabetic addition, i.e., A, B, C or D, can in most cases be related to certain batches and collection times. Annotations on most of the labels included the original Cowley number with other information on one or both sides. Upon identifying the taxon, Bailey wrote on the same label the species name and



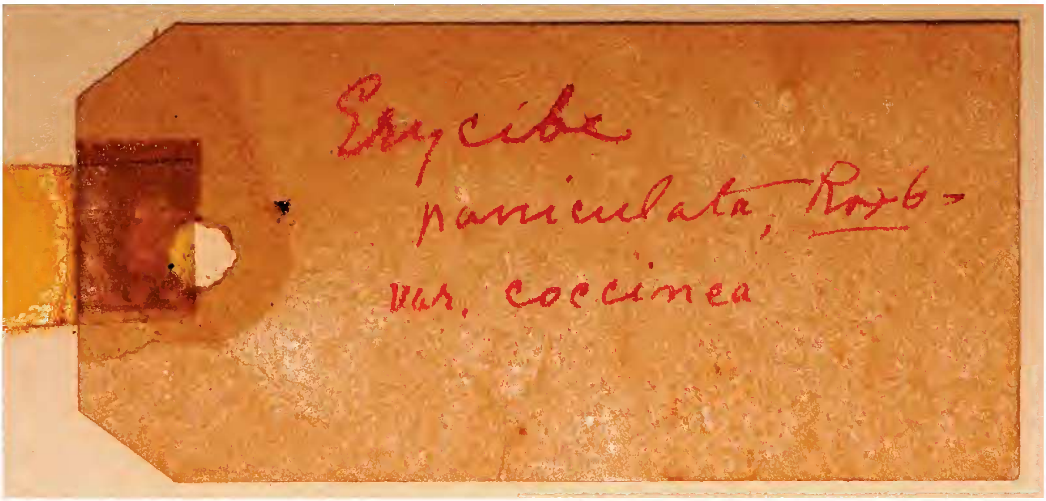
4110 Kamerunga. Native Name nonglro

Large woody Climber

Fruit - pleasing

Cardinal. February

Fig. 2. One side of a label that Cowley attached to his specimen of *Erycibe coccinea* (BRI).



Erycibe

paniculata, Roxb.-

var. coccinea

Fig. 3. Reverse side of label in Fig. 2, with the species name written by F.M. Bailey.

in some cases additional information that Cowley may have provided in accompanying correspondence **(Fig. 3).**

Summary of collections

About 370 Cowley specimens have been located. Most of these (*c*. 330) are extant at BRI. A few cited in protologues have not been found. Duplicates and unicates have been located at BM (8 types); CNS (1, no types); K (11 types); L (1 type); M (1 type); MEL (10 types); and NSW (13, 1 type). Of the Cowley specimens, at least 74 (from all herbaria) are involved in typification (holotypes 33; isotypes 32; lectotypes 6; syntypes 3); of these, 19 are associated with currently accepted species names (**Table 2**). Both Ebenezer Cowley and Clara Cowley are commemorated in the names of taxa (**Table 3**) as well as place names in the Cairns area, including Cowley Beach, Cowley Falls and Cowley Street, Kamerunga (DNRM 2013).

Table 2. Taxa for which a Cowley specimen is involved in typification. Individual taxa are number 1 to 47 and arranged in families. Annotations include original name, the type citation, typification, the currently accepted name (in bold), and a reference to the most recent or most relevant application of the names. Queensland Herbarium specimen numbers (AQ) are given for each type to minimise ambiguity where there are multiples of the same Cowley collection number.

Apocynaceae

1. *Ochrosia cowleyi* F.M.Bailey, *Queensland Agric. J.* 1(3): 229 (1897). **Type citation:** *Dalrymple Island, from where Mr. E.Cowley brought the plant now flowering at the Kamerunga State Nursery.* **Type:** Cult. Kamerunga State Nursery [ex Dalrymple Is.], undated, *E.Cowley s.n.* (holo: BRI [AQ332864]). = **Neisosperma oppositifolium** (Lam.) Fosberg & Sachet, *Adansonia* 17(1): 48 (1977); Barker & Telford (1993: 321).

2. *Vincetoxicum pachylepis* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 8: 79 (1893); *Cynanchum pachylepis* (F.M.Bailey) Domin, *Biblioth. Bot.* 89: 531 (1928). **Type citation:** *Kamerunga, E.Cowley.* **Type:** Queensland. Cook District: Kamerunga, Barron River, January 1893, *E.Cowley 67D* (holo: BRI [AQ333088]). = **Marsdenia araujacea** F.Muell., *Fragm.* 6: 135 (1868); Forster (1995: 732).

3. *Wrightia millgar* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 7: 65 (1893); *Wrightia laevis* var. *millgar* (F.M.Bailey) Ngan, *Ann. Missouri Bot. Gard.* 52: 137 (1965). **Type citation:** *Barron River, E.Cowley.* **Type:** Queensland. Cook District: Barron River, undated, *E.Cowley 7D* (holo: BRI [AQ332925]). = **Wrightia laevis Hook.f.,** *Fl. Brit. India [J.D. Hooker]* 3: 654 (1882); Ngan (1965: 137).

Araceae

4. Amorphophallus galbra F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 7: 68 (1893). **Type citation:** *Barron River, and known, according to Mr. E.Cowley, by the name of Galbra.* **Type:** Queensland. Cook District: Barron River, undated, *E.Cowley s.n.* (holo: BRI [AQ332961]); Hay (2011: 252).

5. Rhaphidophora australasica F.M.Bailey, *Queensland Agric. J.* 1(6): 452 (1897). **Type citation:** *Scrubs on range about Cairns, E.Cowley.* **Type:** Queensland. Cook District: Cairns, undated, *E.Cowley s.n.* (holo: BRI [AQ333010]; iso: K); Hay (1993: 296).

6. *Rhaphidophora lovellae* F.M.Bailey, *Queensland Agric. J.* 1: 453 (1897). **Type citation:** *About 20 miles from Cooktown, Miss Lovell; and ranges about Cairns, E.Cowley.* **Type:** Queensland. Cook District: Near Cooktown, undated, *S.Lovell s.n.* (lecto: BRI, *fide* Forster & Dowe 2014). = **Epipremnum pinnatum** (L.) Engl., *Pflanzenr.* 37: 60 (1908).

Arecaceae

7. *Calamus jaboolum* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 13: 14 (1896). **Type citation:** *Mr. E.Cowley tells me that the aborigines at the Barron River, also distinguish three kinds by name – viz. Moti, Jaboolum, and Moologum.* **Type:** Queensland. Cook District: Barron River, undated, *E.Cowley 2 & 3* (holo: BRI [AQ24174]). = **Calamus australis** Mart., *Hist. Nat. Palm. Edn 1,* 3: 213 (1838); Dowe (2010: 60).

8. Calamus moti F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 13: 13 (1896). **Type citation:** *From Mr Cowley I have stem and foliage specimens, and a promise of flower and fruit specimens when available... Mr Cowley tells me that the aborigines at the Barron River also distinguish three kinds by name – viz. Moti, Jaboolum, and Moologum.* **Type:** Queensland. Cook District: Barron River, undated, *E.Cowley 1* (holo: BRI [AQ24176]); Dowe (2010: 64).

9. Livistona muelleri F.M.Bailey, *Queensl. Fl.* 5: 1683 (1902). **Type citation:** *Cairns, E.Cowley.* **Type:** Queensland. Cook District: Cairns, October 1900, *E.Cowley s.n.* (holo: BRI [AQ425082]).

***Note*:** Cowley died in 1899, so the year 1900 may relate to when Bailey received the specimen rather than collection date (Dowe 2009: 260).

Aspleniaceae

10. *Asplenium simplicifrons* var. *laciniatum* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 13: 16 (1896). **Type citation:** *The plant was found by an Aboriginal and brought to Mr Hobson, of Kuranda, who is now cultivating it in his bush-house. Mr E.Cowley, of Kamerunga, from whom I received the specimens, says that the forked fronds are seldom formed, but those with the lacinate margins are very numerous.* **Type:** Queensland. Cook District: Kuranda, Hobson, undated, received through *E.Cowley s.n.* (holo: BRI [AQ144641]). = **Asplenium simplicifrons** F.Muell., *Fragm.* 5: 74 (1865); Brownsey (1998: 302).

Asteraceae

11. *Conyza elata* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 8: 78 (1893), *nom. illeg. non* Kunth. & Boucheé. **Type citation:** *Abounding in the scrubs of the Russell River, and attaining the height of 12 or 14 ft., Bellenden-Ker Expedition; Barron River Scrubs. E.Cowley.* **Type:** Queensland. Cook District: Stoney Creek, Barron River, undated, *E.Cowley 72B* (lecto: BRI, 2 sheets [AQ370513]; *fide* Forster & Dowe 2014).
= **Blumea riparia** (Blume) DC., *Prodr.* 5: 444 (1836); CHAH (2011).

Bignoniaceae

12. *Diplanthera hirsuta* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 14: 11 (1896); *Deplanchea hirsuta* (F.M.Bailey) Steenis, *Recueil Trav. Bot. Neerl.* 920 (1927). **Type citation:** *Stony Creek, Cairns (a shoot and loose flowers), L.J.Nugent. A large leaf and very young shoot gathered on Thursday Island, E.Cowley.* **Type:** Queensland. Cook District: Stoney Creek, undated, *L.J.Nugent s.n.* (lecto: BRI [AQ333176], *fide* Forster & Dowe 2014).
= **Deplanchea tetraphylla** (R.Br.) F.Muell., *2nd Syst. Census Austral. Pl.* 167 (1889); CHAH (2010).

Caesalpiniaceae

13. *Cassia brewsteri* var. *sylvestris* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 3: 11 (1891). **Type citation:** lacking, but cited as '*Kamerunga, Barron River, E.Cowley'* by Bailey (1902: 456). **Type:** Queensland. Cook District: Cairns, undated, *E.Cowley s.n.* (holo: BRI [AQ17718]). = **Cassia queenslandica** C.T.White, *Proc. Roy. Soc. Queensland* 50: 74 (1939).

***Notes*:** Symon (1966) included *C. brewsteri* var. *sylvestris* as a synonym of *C. queenslandica*. Amongst his selected specimens, Symon (1966: 80) listed '*E.Cowley, Redlynch (Kamerunga) Barron River: BRI'*. There is one Cowley specimen extant at BRI related to this taxon, though labelled as 'Cairns', but the citation appears to relate to this specimen.

Convolvulaceae

14. *Erycibe paniculata* var. *coccinea* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 8: 80 (1893). **Type citation:** *I am indebted to Miss Cowley, of Kamerunga, for the ripe fruit of the above plant, which she says is of a pleasing cardinal red.* **Type:** Queensland. Cook District: Kamerunga, undated, *E.Cowley 71D* (holo: BRI [AQ354886]). = **Erycibe coccinea** (F.M.Bailey) Hoogland ex Ooststr., *Fl. Males. Ser. I* 4: 431 (1951); CHAH (2006).

Corynocarpaceae

15. *Cyanocarpus cribbiana* F.M.Bailey, *Queensland Agric. J.* 1(5): 370 (1897); *Helicia cribbiana* (F.M.Bailey) F.M Bailey, *Queensl. Fl.* 4: 1327 (1901). **Type citation:** *Mourilyan district, E.Cowley, Sept., 1897.* **Type:** Queensland. Cook District: Mourilyan district, September 1897, *E.Cowley 3* (holo: BRI [AQ320965]; iso: K). = **Corynocarpus cribbianus** (F.M.Bailey) L.S.Sm., *Proc. Roy. Soc. Queensland* 67: 31 (1956).

***Note*:** Smith (1956: 31) cited *'Mourilyan district, E.Cowley 3, Sept. 1897 – fr.*' as the type specimen. Sleumer (1955) cited the Cowley 'type' specimen at K, but not the one at BRI. In resolution, the BRI specimen represents the holotype, and the duplicate at K an isotype.

Cucurbitaceae

16. *Zehneria ejecta* F.M.Bailey, *Queensl. Fl.* 2: 699 (1900); *Melothria ejecta* (F.M.Bailey) Cogn., *Pflanzenr.* 66: 108 (1916). **Type citation:** *Thursday Island, E.Cowley (inflorescence 1893). I only received fruit in 1897.* **Type:** Queensland. Cook District: Thursday Island, May 1893, *E.Cowley 65* (holo: BRI [AQ334631]). = **Muellerargia timorensis** Cogn., *Monogr. Phan. [A.DC & C.DC]* 3: 630 (1881); Telford (1982: 188).

Cunoniaceae

17. *Weinmannia apetala* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 8: 76 (1893); *Pseudoweinmannia apetala* (F.M.Bailey) Engl., *Nat. Pflanzenfam. [Engler & Prantl] ed. 2* 18 a: 249 (1930). **Type citation:** *Kamerunga, E.Cowley.* **Type:** Queensland. Cook District: Kamerunga, January 1892, *E.Cowley 65* (holo: BRI [AQ341025]; iso: K). = **Pseudoweinmannia lachnocarpa** (F.Muell.) Engl., *Nat. Pflanzenfam. [Engler & Prantl] ed. 2* 18 a: 249 (1930); Rozefelds & Pellow (2011: 261).

Cyperaceae

18. *Gahnia breviaristata* Benl, *Repert. Spec. Nov. Veg.* 44: 199 (1938). **Type citation:** *Australiens. North Queensland: Kamerunga, Barron River (E.Cowley, No. 33d – Typus in Hb. München, ex Hb. Queensl., Brisbane.* **Type:** Queensland. COOK DISTRICT: Barron River, undated, *E.Cowley 33D* (holo: M; iso: BRI [AQ341239], MEL). = **Gahnia sieberiana** Kunth, *Enum. Pl. (Kunth)* 2: 332 (1837); CHAH (2012).

Dilleniaceae

19. *Tetracera cowleyana* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 5: 7 (1892). **Type citation:** *Herbert River, H.G. Eaton; Cairns, E.Cowley.* **Type:** Queensland. COOK DISTRICT: Cairns, undated, *E.Cowley 22* (lecto: BRI [AQ341696], *fide* Forster & Dowe 2014). = **Tetracera nordtiana** var. **moluccana** (Martelli) Hoogland, *Fl. Males. Ser. I* 4: 145 (1951).

Fabaceae

20. *Kennedia exaltata* F.M.Bailey, *Queensland Agric. J.* 1(1): 79 (1897); *Kennedya* ? *exaltata* F.M.Bailey, *Comp. Cat. Queensland Pl.* 143 (1913). **Type citation:** *Scrubs of the Barron River, E.Cowley.* **Type:** Queensland. COOK DISTRICT: Kamerunga, undated, *E.Cowley s.n.* (holo: BRI [AQ228870]). = **Pueraria montana** var. **lobata** (Willd.) Maesen & S.M.Almeida ex Sanjappa & Predeep, *Legumes Ind.* 288 (1992); Sanjappa (1992).

Flacourtiaceae

21. Homalium circumpinnatum F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 5: 17 (1892). **Type citation:** *Cairns, E.Cowley.* **Type:** Queensland. COOK DISTRICT: Near Cairns, undated, *E.Cowley 21A* (holo: BRI [AQ342709]; iso: BM); Jessup (1982: 79).

Icacinaceae

22. '*Gomphandra polymorpha* Wight var. *6*' F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 8: 72 (1893), *nom. illeg.* **Specimen citation:** *Scrubs of the Barron River, E.Cowley. Sept. 1893.* = **Gomphandra australiana** F.Muell., *Fragm.* 6(41): 3 (1867); Guymer (1984: 209).

Note: Bailey (1893) noted: '*From the fragmentary specimens which I have of G. australiana F. v. M., the present plant seems to differ considerably both in foliage and inflorescence*'; he subsequently added '*Wood of light colour and nicely marked*' (Bailey 1913).

Lauraceae

23. Cryptocarya oblata F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 9: 11 (1894). **Type citation:** *Daintree River, E.Cowley.* **Type:** Queensland. COOK DISTRICT: Daintree River, June 1894, *E.Cowley 7* (holo: BRI [AQ340529]; iso: K); Hyland (1982: 199).

24. Endiandra cowleyana F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 5: 23 (1892). **Type citation:** *Scrubs near Barron River, E.Cowley.* **Type:** Queensland. COOK DISTRICT: [Barron River], undated, *E.Cowley 42* (holo: BRI [AQ340560]; iso: BM, K); Hyland (1982: 225).

25. Endiandra sankeyana F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 8: 82 (1893). **Type citation:** *Scrubs of the Barron River, E.Cowley.* **Type:** Queensland. COOK DISTRICT: Barron River, undated, *E.Cowley 81D* (holo: BRI [AQ340579]; iso: K, MEL); Hyland (1982: 247).

Lycopodiaceae

26. *Lycopodium clarae* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 7: 69. (1893); *Urostachys clarae* (F.M.Bailey) Herter ex Nessel, *Bärlappgewächse* 185 (1939); *Huperzia clarae* (F.M.Bailey) Holub, *Geobot. Phytotax.* 20(1): 71 (1985). **Type citation:** *Upper Freshwater Creek, E.Cowley.* **Type:** Queensland. Cook District: Upper Freshwater Creek, undated, *E.Cowley 29D* (holo: BRI [AQ24829]; iso: K). = **Phlegmariurus dalhousieanus** (Spring) A.R.Field & Bostock, *PhytoKeys* 20: 38 (2013).

***Notes*:** The type citation (Bailey 1893) noted E.Cowley as the collector. Later, Bailey (1902) noted that "Miss Clara Cowley" collected a specimen at Upper Freshwater Creek. Chinnock (2003) cited the holotype of *L. clarae* as "*Upper Freshwater Creek…C. Cowley*", but this is rescinded by the action of Field & Bostock (2013) who designated *E.Cowley 29* as the holotype. However, the BRI specimen appears to be composed of two elements, one the original E.Cowley collection and the other the C.Cowley collection. It is not possible to determine which is which and therefore the entire sheet has been interpreted as the type. There is some correspondence regarding this between F.M.Bailey and both E.Cowley and C.Cowley, and it is possible that C.Cowley sent Bailey material from a plant that was cultivated in the Kamerunga State Nursery shade houses. The origin of this plant was most likely the E. Cowley collection from Freshwater Creek (Field & Bostock 2013: 38).

Meliaceae

27. *Castanospora longistipitata* F.M.Bailey, *Queensl. Fl.* 1: 288 (1899); *Rhetinosperma longistipitatum* (F.M.Bailey) Radlk., *Nat. Pflanzenfam. Nachtr. 3,* 2(3): 204 (1907). **Type citation:** *Scrubs of the Barron River, E.Cowley.* **Type:** Queensland. Cook District: Near Cairns, scrubs of the Barron River, undated, *E.Cowley 8D* (holo: BRI [AQ237765]). = **Chisocheton longistipitatus** (F.M.Bailey) L.S.Sm., *Proc. Roy. Soc. Queensland* 70(5): 29 (1959); Smith (1959: 29); Mabberley & Pannell (2013: 22).

28. Dysoxylum pettigrewianum F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 5: 9 (1892) [as *Dysoxylon pettigrewianum*]. **Type citation:** *Scrubs at the base of Bellenden-Ker Range and the Barron River.* **Type:** Queensland. Cook District: Base of Bellenden Ker Range, also at the Barron River, undated, *E.Cowley* (holo: BRI [AQ23121]; iso: BM, MEL).

Note: The type collection may possibly consist of material from two locations; however, as only a single branchlet is preserved it can probably be presumed to originate from 'Base of Bellenden Ker Range' and that Cowley subsequently observed it at the 'Barron River'.

Monimiaceae

29. *Mollinedia subternata* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 5: 22 (1892). **Type citation:** *Freshwater Creek, near Cairns, E.Cowley.* **Type:** Queensland. Cook District: Cairns, Freshwater Creek, undated, *E.Cowley 42A* (holo: BRI [AQ23244]). = **Steganthera laxiflora (**Benth.) Whiffin & Foreman var. **laxiflora**, *Fl. Australia* 2: 452 (2007); Whiffin & Foreman (2007: 85).

Moraceae

30. *Ficus thynneana* F.M.Bailey, *Queensland Agric. J.* 1(3): 231 (1897). **Type citation:** *On the beach at Cairns, and locally known as the Banyan.* **Type:** Queensland. Cook District: Cairns, August 1897, *E.Cowley s.n.* (holo: BRI [AQ65667]). = **Ficus microcarpa** L.f., *Suppl. Pl.* 442 (1782).

***Note*:** Chew (1989: 39) cited the type as 'Cairns, Qld, *E.Cowley; n.v.*' based on the type citation, but did not provide details about the specimen.

Myrtaceae

31. *Eugenia kuranda* F.M.Bailey, *Queensl. Fl.* 2: 658 (1900). **Type citation:** *Johnson, Dr. Thos. L.Bancroft; Barron river, E.Cowley.* **Type:** Queensland. Cook District: Johnstone River, undated, *T.L.Bancroft R11* (lecto: BRI [AQ269987]; isolecto: MEL, *fide* Hyland 1983: 96). = **Syzygium kuranda** (F.M.Bailey) B.Hyland, *Austral. J. Bot. Suppl. Ser.* 9: 96 (1983).

***Note*:** The specimen *Cowley 63C* (syntype), from Johnstone River, is extant in BRI.

32. *Myrtus exaltata* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 8: 77 (1893); *Austromyrtus exaltata* (F.M.Bailey) Burrett, *Notizbl. Bot. Gart. Berlin-Dahlem* 15(3): 501 (1941). **Type citation:** *Scrubs about the Barron River, the fruit used for jam-making, E.Cowley.* **Type:** Queensland. Cook District: Kamerunga, Barron River, undated, *E.Cowley 7B* (holo: BRI [AQ278628]; iso: K). = **Syzygium luehmannii** (F.Muell.) L.A.S.Johnson, *Contr. New South Wales Natl Herb.* 3(3): 99 (1962); Hyland (1983: 98).

33. *Rhodamnia trinervia* var. *spongiosa* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 7: 62 (1893). **Type citation:** *Tringilburra Creek, Bellenden-Ker Expedition. Barron River, E.Cowley.* **Type:** Queensland. Cook District: Barron River, undated, *E.Cowley 60D* (lecto: BRI [AQ44905], *fide* Snow 2007: 30). = **Rhodamnia spongiosa** (F.M.Bailey) Domin, *Biblioth. Bot.* 89: 486 (1928).

***Note*:** Snow (2007: 30) chose '*Cowley 60D'* as the lectotype, but the '*Tringilburra Creek, Bellenden Ker Expedition'* collection has not been identified or located.

Orchidaceae

34. *Spathoglottis soutteriana* F.M Bailey, *Proc. Roy. Soc. Queensland* 11: 15 (1895). **Type citation:** *Stony Creek, Cairns-Herberton Railway line. I received a leaf and single bloom in Feb. 1893, from Mr. L.J.Nugent and more perfect specimens last October from Mr. E.Cowley, of Kamerunga, and consider it to differ from others sufficient to rank as a distinct species.* **Type:** Queensland. Cook District: Kamerunga, 7 Oct. 1894, *E.Cowley 3* (lecto: BRI [AQ312003], *fide* Clements 1989: 134). = **Spathoglottis paulinae** F.Muell., *Fragm.* 6(43): 95 (1867).

***Note*:** Clements (1989) noted that the *Nugent* specimen cited in the protologue could not be located at BRI.

35. Zeuxine oblonga R.S.Rogers & C.T.White, *Proc. Roy. Soc. Queensland* 32: 121 (1921). **Type citation:** *Kamerunga (Barron River), E.Cowley; Mackay, L.J.Nugent; Daintree River, Gus. Rosenstrom.* **Type:** Queensland. Cook District: Kamerunga, Barron River, undated, *E.Cowley s.n.* (lecto: BRI [AQ369363], *fide* Clements 1989: 147).

***Note*:** Clements (1989: 147) cited the two other collections, *Nugent s.n.* and *Rosenstrom s.n.* listed in the protologue, as syntypes.

Pittosporaceae

36. Bursaria tenuifolia F.M.Bailey, *Queensl. Fl.* 1: 72 (1899). **Type citation:** *Barron River, E.Cowley: Shaw Island, Lord Lamington: Northcote, R.C.Burton; Herberton, J.F.Bailey.* **Type:** Queensland. Cook District: Shaw Island, July 1899, *Lord Lamington [as Lord Rassington]* (lecto: BRI, *fide* Cayzer *et al.* 1999: 132).

***Note*:** The collection *Cowley 70C* (syntype), from Barron River is extant in BRI.

Poaceae

37. *Panicum prenticeanum* F.M.Bailey, *Syn. Queensl. Fl.* Suppl. 3: 82 (1890); *Panicum sarmentosum* var. *prenticeanum* (F.M.Bailey) Domin, *Biblioth. Bot.* 85: 315 (1915). **Type citation:** *Harvey's Creek, Russell River, and Tringilburra Creek; very abundant on the rich scrub lands.* **Type:** Queensland. Cook District: Harveys Creek, Russell River, and Tringilburra Creek, undated, *F.M.Bailey s.n.* (holo: BRI; iso: K). = **Panicum incomtum** Trin., *Graminibus Panic. [Trinius]* 200 (1826).

***Note*:** The specimen '[Kamerunga?] *E.Cowley 45B* at BM, has been labelled as a 'type' with a duplicate at BRI. However, the type is clearly the Bailey collection. Webster (1987: 129) gave the holotype at K; however, S.T.Blake in 1971 had already annotated the BRI material (not seen by Webster) as this and the K duplicate of Bailey's should be regarded as an isotype.

Proteaceae

38. *Helicia glabrescens* C.T.White, *Proc. Roy. Soc. Queensland* 55: 81 (1944). **Type citation:** Cook District*: Barron River, E.Cowley 74B (type: Flowers), Sept. 1892 (large shrub).* **Type:** Queensland. Cook District: Barron River, September. 1892, *E.Cowley 74B* (holo: BRI [AQ317432]). = **Helicia australasica** F.Muell., *Hooker's J. Bot. Kew Gard. Misc.* 9: 22 (1857); Sleumer (1955: 16).

Rosaceae

39. *Pygeum turnerianum* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 8: 75 (1893). **Type citation:** *For shoot, bearing male flowers, and later branches with ripe fruit, Barron River, E.Cowley. Stones of fruit, Christie Palmerston and A.Meston.* **Type:** Queensland. Cook District: Barron River, 1893, *E.Cowley s.n.* (lecto: BRI [AQ317688], *fide* Forster & Dowe 2014). = **Prunus turneriana** (F.M.Bailey) Kalkman, *Blumea* 13(1): 81 (1965).

Rubiaceae

40. Gardenia ovularis F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland 7*: 64 (1893). **Type citation:** *Johnstone River, Dr. T.L.Bancroft. Barron River, E.Cowley.* **Type:** Queensland. Cook District: Johnstone River, undated, *T.L.Bancroft s.n.* (lecto: BRI [AQ317839]; isolecto: BRI, K, MEL, *fide* Puttock 1988: 437).

***Note*:** Puttock (1988: 437) chose the Bancroft collection as the type of this name. The Cowley collection (syntype) is extant at BRI. This collection (*Cowley 71*) appears to be a mixture of elements from 1891 and Jan. 1892.

41. *Nauclea gordoniana* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 10: 22 (1895); *Neonauclea gordoniana* (F.M.Bailey) Ridsdale, *Gard. Bull., Singapore* 25: 272 (1970). **Type citation:** *Barron River, E.Cowley.* **Type:** Queensland. Cook District. Kamerunga, undated, *E.Cowley 92D* (holo: BRI [AQ433563]; iso: L). = **Neonauclea glabra** (Roxb.) Bakh.f. & Ridsdale, *Blumea* 34(1): 240 (1989).

***Note*:** Ridsdale (1970: 272) cited the specimen '*Cowley, Baron River (TYPE)*', but without further details. Later, Ridsdale (1989: 241) provided the location of the holotype at BRI, and an isotype at L.

42. *Plectronia odorata* var. *reticulata* C.T.White, *Proc. Roy. Soc. Queensland* 50: 78 (1939). **Type citation:** *Thursday Island (E.Cowley, No. 10, type of variety, flowering specimens).* **Type:** Queensland. Cook District: Thursday Island [1893], *E.Cowley 10* (holo: BRI [AQ318150]). = **Psydrax reticulata** (C.T.White) S.T.Reynolds & R.J.F.Hend., *Austrobaileya* 6(4): 855 (2004).

Sapindaceae

43. *Cupania flagelliformis* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 8: 73 (1893). **Type citation:** '*Scrub about the Barron River, E.Cowley.* **Type:** Queensland. Cook District: Scrubs about the Barron River, undated, *E.Cowley 29B & 83D* (holo: BRI [AQ22540]). = **Cupaniopsis flagelliformis** (F.M.Bailey) Radlk., *Repert. Spec. Nov. Veg.* 20(1–5): 31 (1924); Reynolds (1984: 50).

44. *Cupania sericolignis* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 18: 11 (1892). **Type citation:** *Mulgrave River, Bellenden-Ker Expedition; scrub about the Barron River, E.Cowley.* **Type:** Queensland. Cook District: Barron River, Kamerunga, May 1892, *E.Cowley 69A* (lecto: BRI [AQ22543], *fide* Reynolds 1982: 490). = **Lepiderema sericolignis** (F.M.Bailey) Radlk., *Repert. Spec. Nov. Regni Veg.* 20(1–5): 29 (1924).

Note: Reynolds (1982: 490) listed the Cowley collection as 'holo'; however, it is an effective lectotypification as she also explicitly excluded the 'Mulgrave River, Bellenden-Ker Expedtion' collection that pertains to *Guioa acutifolia*.

45. *Ratonia nugentii* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 14: 9 (1896). **Type citation:** *Freshwater Creek, Cairns, E.Cowley and L.J. Nugent.* **Type:** Queensland. Cook District: Freshwater Creek, near Cairns, August 1896, *L.J.Nugent, E.Cowley 8C* (holo: BRI [AQ22535]). = **Toechima erythrocarpum** (F.Muell.) Radlk., *Act. Congr. Bot. Amsterdam* 130 (1879); Reynolds (1985: 178).

Note: It is unclear whether this collection comprises two separate portions from either collector or whether it was a co-collection.

Sapotaceae

46. *Sideroxylon dugulla* F.M.Bailey, *Queensland Agric. J.* 1(1): 80 (1897); *Sersalisia dugulla* (F.M.Bailey) Domin, *Biblioth. Bot.* 89: 509 (1928); *Pouteria dugulla* (F.M.Bailey) Baehni, *Candollea* 9: 407 (1942). **Type citation:** *Barron River, E.Cowley. Fruit eaten by natives.* **Type:** Queensland. Cook District: Barron River, May 1897, *E.Cowley KA1* (holo: BRI [AQ22565]; iso: BM, K). = **Planchonella pohlmaniana** (F.Muell.) Pierre ex Dubard, *Ann. Inst. Bot.-Geol. Colon. Marseille ser. 2* 10: 47 (1912); CHAH (2008).

Sterculiaceae

47. *Tarrietia argyrodendron* var. *macrophylla* F.M.Bailey, *Bot. Bull. Dept. Agric. Queensland* 9: 5 (1894). **Type citation:** *Barron River, E.Cowley.* **Type:** Queensland. Cook District: Barron River, undated, *E.Cowley 111* (holo: BRI [AQ22696]). = **Argyrodendron trifoliolatum** var. **macrophyllum** (F.M.Bailey) Burtt Davy, *Trop. Woods 51*: 19 (1937).

Note: Referenced but not typified in Kostermans (1959: 529) and Smith (1969: 19).

Table 3. Plant taxa named for Ebenezer Cowley, and his first daughter Clara Moxon (née Cowley). Currently accepted names are in bold

Aidia cowleyi Puttock [named for the type locality Cowley Beach] (Puttock 1988)
Endiandra cowleyana F.M.Bailey [named for Ebenezer Cowley]
Lycopodium clarae F.M.Bailey, synonym of ***Phlegmariurus dalhousieanus*** (Spring) A.R. Field and Bostock [named for Clara Cowley, 1st daughter of Ebenezer Cowley]
Ochrosia cowleyi F.M.Bailey [named for Ebenezer Cowley], synonym of ***Neisosperma oppositifolium*** (Lam.) Fosberg & Sachet
Tetracera cowleyana F.M.Bailey var. *cowleyana* [named for Ebenezer Cowley], synonym of ***Tetracera nordtiana*** var. ***moluccana*** (Martelli) Hoogland

Acknowledgements

I thank George Drewery, Gil Jennex, Alan Broughton and Pat Broughton at the Cairns Historical Society who assisted with copies of Cowley's publications and biographical and historical information. Paul Forster and Peter Bostock at BRI assisted with HerbRecs data and locating Cowley specimens in BRI. Frank Zich at CNS is thanked for assistance with data retrieval. Pina Milne is thanked for assistance in locating Cowley specimens in MEL Ashley Field is thanked for discussion and information about the taxonomy of *Phlegmariurus dalhousieanus* and the typification of *Lycopodium clarae*.

References

Anonymous. (1896). The cane-borer. *The Hawaiian Planters' Monthly* 15(10): 475–477.

Awc [Australian Weeds Committee] (2012). *Mesquite (Prosopis spp.) strategic plan 2012–17, Weeds of National Significance*. Australian Government Department of Agriculture, Fisheries and Forestry: Canberra.

Bailey, F.M. (1891). Concise history of Australian botany. *Proceedings of the Royal Society of Queensland* 8: xvi–xli.

— (1893a). Botany: Contributions to the Queensland flora. *Botany Bulletin: Department of Agriculture Queensland* 7: 59–69.

— (1893b). Botany: Contributions to the Queensland flora. *Botany Bulletin: Department of Agriculture Queensland* 8: 71–114.

— (1902). *Cassia brewsteri*. *The Queensland Flora, Part* 2, p. 456. H.J. Diddams & Co: Brisbane.

— (1913). *Comprehensive Catalogue of Queensland Plants*. Government Printer: Brisbane.

Bailey, J.F. (1910). Introduction of economic plants into Queensland. *Proceedings of the Royal Society of Queensland* 22: 77–102.

Barker, T. & Byford, I. (1988). *Harvest and heartaches: images and stories of Queensland's agricultural past*. Queensland Department of Primary Industries: Brisbane.

Barker, R.M. & Telford, I.R.H. (1993). In A.Orchard (ed.), Apocynaceae. *Fl. Australia* 50: 318–324. Australian Government Publishing Service: Canberra.

Barret, C.M.W. (2013a). *Ebenezer Cowley*; www/geni.com/people/Ebenezer-Cowley. Accessed 24 June 2013.

— (2013b). *Clara Moxon*; www.geni.com/people/Clara-Moxon. Accessed 24 June 2013.

Benson, A.H. (1914). *Fruits of Queensland*. A.J. Cumming, Government Printer: Brisbane.

Brownsey, P.J. (1998). Aspleniaceae. In P.M. McCarthy (ed.), *Flora of Australia* 48: 295–327. ABRS/CSIRO Australia: Melbourne.

Cairns Plan (2005). *Cairns Region Planning Scheme*. Cairns Regional Council: Cairns.

Cayzer, L.W., Crisp, M.D. & Telford, I.R.H. (1999). *Bursaria* (Pittosporaceae): a morphometric analysis and revision. *Australian Systematic Botany* 12: 117–143.

CHAH (2006–2012). Viewed 16 July 2013, http://www.anbg.gov.au/gardens/.

Chew, W.-L. (1989). Moraceae. In A.S. George (ed.), *Flora of Australia* 3: 15–68. Australian Government Publishing Service: Canberra.

Chinnock, R.J. (2003). Lycopodiaceae. In P.M. McCarthy (ed.), *Flora of Australia* 48: 66–85. ABRS/CSIRO Australia: Melbourne.

Clements, M.A. (1989). Catalogue of Australian Orchidaceae. *Australian Orchid Research* 1: 1–160.

Cowley, E. (1890–1898). *Ebenezer Cowley Scrapbook*. State Library of Queensland, Record number 695752.

—— [signed as Observer] (1890). Bananas. *Cairns Post*, Saturday 12 July, p. 3.

—— [signed as E.C.] (1891). Mangosteen. *Cairns Post*, Saturday 27 June. p. 2.

—— [unsigned] (1892). Sida retusa. *Cairns Post*, Saturday 27 February. p. 3.

—— (1897a). Rice in northern Queensland. *Cairns Morning Post*, Thursday 28 October. p. 3.

—— (1897b). Some economic plants growing at Kamerunga State Nursery. No. 1. Mango. *Cairns Morning Post*, Wednesday, June 16, p. 4.

—— (1897c). Some economic plants growing at Kamerunga State Nursery. No. 8. Banana. *Cairns Morning Post*, Wednesday, June 30, p. 3.

—— (1897d). A tropical industry: India-Rubber (Caoutchouc). *Queensland Agricultural Journal* 1: 46–48.

—— (1897e). A tropical industry: India-Rubber (Caoutchouc). Part 11. *Queensland Agricultural Journal* 1: 136–138.

—— (1897f). The divi divi tree (*Caesalpinia coriara*, Willdenow). *Queensland Agricultural Journal* 1: 139–140.

—— (1897g). Rice in northern Queensland. *Queensland Agricultural Journal* 1: 236–237.

—— (1897h). A tropical industry: India-Rubber (Caoutchouc). Part III. *Queensland Agricultural Journal* 1: 240–243.

—— (1897i). India-Rubber (Caoutchouc). *Queensland Agricultural Journal* 1: 374–379.

—— (1897j). West African oil palm. (*Elaeis guineensis*). *Queensland Agricultural Journal* 1: 458–461.

—— (1898a). Cultural notes for tropical Queensland. Pawpaw (*Carica papaya*). *Queensland Agricultural Journal* 2: 208–210.

—— (1898b). Cultural notes for tropical Queensland. *Queensland Agricultural Journal* 2: 432.

—— (1898c). Cultural notes for tropical Queensland. *Queensland Agricultural Journal* 2: 533.

—— (1899a). Queensland nuts. *Queensland Agricultural Journal* 4: 57–58

—— (1899b). Tropical industries. *Theobroma cacao*. *Queensland Agricultural Journal* 4: 124–125.

Dowe, J.L. (2009). A taxonomic account of *Livistona* R. Br. (Arecaceae). *Garden's Bulletin, Singapore* 60: 185–344.

—— (2010). *Australian Palms*. CSIRO Publishing: Collingwood.

Dnrm [Dept of Natural Resources & Mines]. (2013). *Queensland Place Names*. www.nrm.qld.gov.au/property/placenames/details. Accessed 9 May 2013.

Field, A.R. & Bostock, P.D. (2013). New and existing combinations in Palaeotropical *Phlegmariurus* (Lycopodiaceae) and lectotypification of the type species *Phlegmariurus phlegmaria* (L.) T.Sen & U.Sen. *PhytoKeys* 20: 33–51.

Forster, P.I. (1995). Circumscription of *Marsdenia* (Asclepiadaceae: Marsdenieae), with a revision of the genus in Australia and Papuasia. *Australian Systematic Botany* 8: 703–933.

Forster, P.I. & Dowe, J.L. (2014). From p. 316.

George, A.S. (2009). *Australian botanist's companion*. Four Gables Press: Kardinya.

Gibbney, H.J. & Smith, A.G. (1987). *A Biographical Register 1788–1939*, Vol. 1. Australian Dictionary of Biography, Australian National University: Canberra.

Griggs, P. (2003). Australian scientists, sugar cane growers and the search for new gummosis-resistant and sucrose-rich varieties of sugar cane, 1890–1920. *Historical Records of Australian Science* 14: 291–311.

—— (2011). *Global industry, local innovation: the history of cane sugar production in Australia, 1820–1995*. P. Lang: Bern.

Guymer, G.P. (1984). Icacinaceae. In A.S. George (ed.), *Flora of Australia* 22: 204–211. Australian Government Publishing Service: Canberra.

Hay, A. (1993). *Rhaphidophora petrieana* - a new aroid liane from tropical Queensland: with a synopsis of the Australian Araceae – *Monstereae*. *Telopea* 5: 293–300.

—— (2011). Araceae. In A.G. Wilson (ed.), *Flora of Australia* 39: 236–274. ABRS/CSIRO Australia: Melbourne.

Hoogland, R.D. (1953). The genus *Tetracera* (Dilleniaceae) in the eastern Old World. *Reinwardtia* 2: 185–224.

Hyland, B.P.M. (1982). A revision of Lauraceae in Australia (excluding *Cassytha*). *Australian Systematic Botany* 2: 135–367.

—— (1983). A revision of *Syzygium* and allied genera (Myrtaceae) in Australia. *Australian Systematic Botany, Supplementary Series* 9: 1–164.

Jessup, L.W. (1982). Flacourtiaceae. In A.S. George (ed.), *Flora of Australia* 8: 66–84. Australian Government Publishing Service: Canberra.

Kostermans, A.J.G.H. (1959). Monograph of the genus *Heritiera* Aiton (Stercul.). *Reinwardtia* 4: 465–583.

Mabberley, D.J. & Pannell, C.M. (2013). Meliaceae. In A.G. Wilson (ed.), *Flora of Australia* 26: 1–42. ABRS/CSIRO Publishing: Melbourne.

Ngan, P.T. (1965). A revision of the genus *Wrightia* (Apocynaceae). *Annals of the Missouri Botanical Garden* 52: 114–175.

Orchard, A.E. (1999). A history of systematic botany in Australia. In A.E. Orchard (ed.), *Flora of Australia*, 2nd edition, 1: 11–103. ABRS/CSIRO Australia: Melbourne.

Puttock, C.F. (1988). A revision of *Gardenia* Ellis (Rubiaceae) from north-eastern Queensland. *Austrobaileya* 2: 433–449.

Reynolds, S.T. (1982). Notes on Sapindaceae, II. *Austrobaileya* 1: 472–496.

—— (1984). Notes on Sapindaceae, III. *Austrobaileya* 2: 29–64.

—— (1985). Notes on Sapindaceae, IV. *Austrobaileya* 2: 153–189.

Reynolds, S.T. & Henderson, R.J.F. (2004). Vanguerieae A.Rich ex Dum. (Rubiaceae) in Australia, 3. Psydrax Gaertn. *Austrobaileya* 6: 817–889.

Ridsdale, C.E. (1970). The arborescent *Naucleae* of New Guinea and Solomon Islands (Rubiaceae). *Garden's Bulletin, Singapore* 25: 247–281.

—— (1989). A revision of *Neonauclea* (Rubiaceae). *Blumea* 34: 177–275.

Rozefelds, A.C. & Pellow, B. (2011). A taxonomic revision of *Pseudoweinmannia* Engl. (Cunoniaceae: *Geissoieae*). *Austrobaileya* 8: 252–266.

Sanjappa, M. (1992). *Legumes of India*. Bishen Singh Mahendra Pal Singh: Dehra Dun.

Saunders, K. (2013). Cowley, Sir Alfred Sandlings (1848–1926). *Australian Dictionary of Biography*. National Centre of Biography, Australian National University. http://abd.anu.edu.au/biography/cowley-sir-alfred-sandlings-5795/text9833, accessed 14 May 2013.

Shelton, E.M. (1892). *Tree planting for shade and ornament: suggestions for teachers and others interested in the planting of trees.* Department of Agriculture Brisbane. Bulletin 17. J.C. Beal: Brisbane.

Sim, J. (2001). Climate: living in the tropics. In J. Sim (ed.), *Report 2: Thematic study of cultural landscape of Queensland*, pp. 2–18. Cultural Landscapes Research Unit, QUT: Brisbane.

—— (2012). Spreading the word: garden writing in the sub-tropics. *Queensland Review* 19: 97–118.

Sleumer, H. (1955). Studies in Old World Proteaceae. *Blumea* 8: 2–95.

Smith, L.S. (1956). New species of and notes on Queensland plants. *Proceedings of the Royal Society of Queensland* 67: 29–40.

—— (1959). New species of and notes on Queensland plants – IV. *Proceedings of the Royal Society of Queensland* 70: 27–32.

—— (1969). New species of and notes on Queensland Plants V. *Contributions from the Queensland Herbarium* 6: 1–25.

Snow, N. (2007). Systematics of the Australian species of *Rhodamnia (*Myrtaceae). *Systematic Botany Monographs* 82: 1--69.

Stephens, S.E. (1981). Kamerunga State Nursery. *Historical Society Cairns, Bulletin* 258.

Symon, D.E. (1966). A revision of the genus *Cassia* L. Caesalpiniaceae in Australia. *Transactions of the Royal Society of South Australia* 90: 73–146.

Telford, I.R.H. (1982). In A.S. George (ed.), Cucurbitaceae. *Flora of Australia* 8: 158–198. Australian Government Publishing Service: Canberra.

Thomatis, D. (1895). Kamerunga State Nursery and its crops. *Australian Tropiculturist and Stockbreeder, and the Queensland Manufacturer* 1(11) [23 December]: 347.

Van Steenis-Kruseman, M.J. (1950). Malaysian plant collections and collectors. *Flora Malesiana Series 1*, 1: 3–639.

Webster, R.D. (1987). *The Australian Paniceae (Poaceae).* J.Cramer: Berlin & Stuttgart.

Whiffin, T. & Foreman, D.B. (2007). Monimiaceae. In A.G. Wilson (ed.), *Flora of Australia* 2: 65–91. ABRS/CSIRO Publishing: Melbourne.